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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,249	12/19/2001	Satoshi Itaya	01827/LH	7377
1933	7590	06/30/2005	EXAMINER	
FRISHAUF, HOLTZ, GOODMAN & CHICK, PC 220 5TH AVE FL 16 NEW YORK, NY 10001-7708			RUDOLPH, VINCENT M	
			ART UNIT	PAPER NUMBER
			2624	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/025,249	<b>Applicant(s)</b> ITAYA, SATOSHI	
	<b>Examiner</b> Vincent Rudolph.	<b>Art Unit</b> 2624	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 December 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/19/2001</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

The title of the invention, "Image Forming Apparatus," is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. A more direct title, for example, could be "Image Forming Apparatus with Toner Level Detection."

***Specification***

The disclosure is objected to because of the following informalities:  
"process unit 16" should be changed to "process unit 15" or "the drum 16" on Page 5, Line 19; on Page 11, Line 6, the phrase "has exceeds" should be changed to "has exceeded", and finally inserting the word 'that' or 'which' within the phrase "replacing the toner cartridge has been used up" on Page 11, Line 10-11.

In addition, on page 12, Line 10-11 of the specification, the phrase "the CPU 31 determines that the lifetime of the drum 16 has just expired" does not clearly state what makes the drum an expendable.

Appropriate correction is required.

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***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-6, 8, 10-13 are rejected under 35 U.S.C. 102(e) as being unpatentable by Asanuma ('896).

Regarding claim 1, Asanuma ('896) discloses an image forming apparatus having a control device (See Figure 1, Element 21) used to judge whether the toner cartridge is empty or not based on the detection output from the empty sensor (See Fig. 1, Element 9e), which is provided within the toner cartridge (See Fig. 1, Element 9; Col. 8, Line 1-7), a counter which keeps track the number of recording sheets that have been printed during the operation of the main cartridge (See Col. 8, Line 29-31), and also maintains the printing state even after the toner has been determined it is low and needs replaced (See Col. 12, Line 19-22).

Regarding claim 3, Asanuma ('896) describes displaying a message on the screen notifying the user the toner cartridge will need replaced soon (See Col. 11, Line 16-19).

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Regarding claim 4, Asanuma ('896) discloses having a photosensitive drum within the image forming apparatus and is used to form the image on its surface (See Fig. 1, Element 6; Col. 7, Line 32-40).

Regarding claim 5, Asanuma ('896) discloses the main cartridge accommodates the photosensitive drum (See Fig. 1, Element 2a, 6; Col. 8, Line 55-56) and a sheet count value represents the number of recording sheets printed during the operation of the main cartridge (See Col. 9, Line 20-23).

Regarding claim 6, Asanuma ('896) discloses the process cartridge includes a main cartridge and a toner cartridge, which uses toner within it (See Fig. 3, Element 2a, 9; Col. 7, Line 28-31).

Regarding claims 8 and 10-13, the rationale provided in rejection of claims 1 and 3-6 are incorporated herein respectively. In addition, the apparatus of claims 1 and 3-6 performs the method steps of claims 8 and 10-13, respectively.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asanuma ('896) in view of Suyehira (Pg. Pub. # 2002/0172520 A1).

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Regarding claims 2 and 9, Asanuma ('896) discloses an image forming apparatus that detects whenever the toner is low, a display message appears letting the user know the toner should be replaced soon (See Col. 11, Line 16-19).

Asanuma ('896) does not disclose a process taken when the toner reaches a certain level, such as automatically ordering a replacement cartridge through the retailer's website.

Suyehira ('520) discloses a image forming apparatus that includes a mode stored within the memory of the printer for notifying the orderer when the toner cartridge is low, and the orderer can either automatically contact the vendor system via the Internet using a browser stored in the printer memory and place an order for another toner, which then stores the order tracking information, such as shipping and received date, item number, and other reliable data, into memory, or contact the vender indirectly through the host computer (See Fig. 1, Element 118 and Fig. 2; Paragraph 0035 and 0036).

It would have been obvious to a person of ordinary skill in the art at the time of the invention by applicant to have a system for detecting the expiring toner level such as the one described by Asanuma ('896). This addition would not only display a warning the toner is low, but also have the capability to place an order for a replacement when it reaches a predetermined level, such as the method described by Suyehira ('520). This would have been obvious because it would reduce the chance the expendable fluid could expire before it is replaced.

Thus, claims 2 and 9 are properly rejected under 35 U.S.C. 103(a).

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Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asanuma ('896) in view of Garr ('420).

Asanuma ('896) describes an image forming apparatus having built-in memory that stores the count sheet value, total operation time, toner cartridge related operation time, and toner replenishing time, which relate to the amount of replenished and remaining toner (See Col. 8, Line 39-51; Col. 10, Line 10-13).

Asanuma ('896) fails to detail a method to keep track of the amount of toner used within the cartridge.

Garr ('420) discloses a method that not only keeps track of the total pages printed for a cartridge, but also tracks the amount of toner used per job, which can be used to estimate the number of pages to print remaining in the toner cartridge (See Col. 17, Line 65-Col. 18, Line 6).

It would have been obvious to a person of ordinary skill in the art at the time of the invention by applicant to not only disclose the amount of toner remaining and replenished, as described by Asanuma ('896), but also a method keeping track the amount of toner used within the cartridge, such as the one disclosed by Garr ('420), to provide the amount of toner used and available after each print in order to calculate an estimated number of pages remaining.

Thus, claims 7 and 14 are properly rejected under 35 U.S.C. 103(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent Rudolph whose telephone number is (571) 272-8243. The examiner can normally be reached on Monday through Friday 8 A.M. - 4:30 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on (571) 272-7437. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vincent Rudolph  
Examiner  
Art Unit 2624



**DAVID MOORE**  
**SUPERVISORY PATENT EXAMINER**  
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